

WHAT IS CLAIMED IS:

1. A movement output apparatus for controllably moving a movement output means in at least two spatial dimensions, the apparatus including:
  - a cog means with a first diameter;
  - 5 a ring with a track formed on an inner surface of the ring, the track having a second diameter which is larger than the first diameter;
  - wherein:
    - the cog means is rotatable by first driving means;
    - 10 the ring is rotatable by second driving means;
    - the cog means is arranged to move, in use, along the track; and
    - the movement output means is attached to the cog means,
  - whereby, in use, movement of the cog means effects movement of the movement output means, and the movement of the movement output means
  - 15 is controllable by control of the first and second driving means to produce substantially linear movement of the movement output means.
2. A movement output apparatus according to claim 1 wherein:
  - the ring defines a rotation plane and the cog means is rotatable by the first driving means about a first axis which is substantially perpendicular to the rotation plane;
  - 5 the ring is rotatable by the second driving means about a second axis which is substantially perpendicular to the rotation plane,
  - the cog means is rotatable relative to the track about a third axis which is substantially perpendicular to the rotation plane, due
  - 10 to an interaction between the cog means and the track; and
  - the third axis is substantially parallel to, but substantially not co-linear with, the second axis.
3. A movement output apparatus according to claim 2 wherein the cog means and the track each have teeth which are meshable together.
4. A movement output apparatus according to claim 1 wherein the cog means and the track each have teeth which are meshable together.

5. A movement output apparatus according to claim 1 wherein at least one of the cog means and the track has a substantially circular configuration.
6. A movement output apparatus according to claim 1 wherein the cog means is rotatably mounted on a first shaft.
7. A movement output apparatus according to claim 6 wherein the first shaft is eccentrically mounted with respect to an output rotation axis of the first drive means.
8. A movement output apparatus according to claim 1 wherein the first diameter is approximately one half of the second diameter.
9. A movement output apparatus according to claim 1 wherein the output movement means is connected to a movement transmission means.
10. A movement output apparatus according to claim 1 further including control means for control of the second driving means, the control means operating according to a predetermined set of instructions.
11. A movement output apparatus according to claim 10 wherein the control means includes a suitably programmed computer.
12. A movement output apparatus according to claim 10, wherein, in use, the control means controls the first driving means.
13. A movement output apparatus according to claim 10 further including a controllable counterbalancing assembly, the assembly including an arrangement of masses which are moveable via one or more driving means controlled by the control means, wherein movement of  
5 the masses is capable of effecting a reduction of vibration in the apparatus.
14. A movement output apparatus according to claim 1 wherein the cog means and/or ring are replaceable by a cog means and/or ring of different dimensions in order for the movement output means to controllably describe a shape of different dimensions.

15. A movement output apparatus according to claim 1 wherein the movement of the movement output means is controllable to produce linear movement along either or both of two mutually perpendicular axes.
16. A movement output apparatus according to Claim 15 wherein in use the two axes are respectively substantially horizontal and substantially vertical.
17. A movement output apparatus according to claim 1 wherein the movement output means is attached to the cog means such that the centre of the movement output means is a distance from the axis of rotation of the cog means which is substantially equal to the first  
5 diameter.
18. A movement output apparatus according to claim 1 wherein the movement output means is substantially cylindrical and its central axis is substantially parallel to the axis of rotation of the cog means and its central axis is a distance from the axis of rotation of  
5 the cog means which is substantially equal to the first diameter.
19. A repetitive processing apparatus including a movement output apparatus according to claim 1, and further including a repetitive processing device for repeated performance of a particular process, wherein the repetitive processing device is connected to the movement  
5 output means, and in use the position of the repetitive processing device is controllable by control of the position of the movement output means.
20. A repetitive processing apparatus according to claim 19 further including moveable conveyor means, whereby articles on which a particular process is to be performed are moveable with respect to the apparatus.
21. A deposition apparatus including any apparatus according to claim 1.
22. A foodstuff processing apparatus including apparatus according to claim 19 wherein the repetitive processing device is a foodstuff

deposition manifold, the manifold being, in use, controllable to deposit foodstuff in a pre-programmed shape.

23. A foodstuff processing apparatus according to claim 22 wherein the foodstuff deposition manifold is capable of performing at least 40 cycles per minute.